LAND USE

Historic and Recent Land Use

The Ozark highlands are ancient, highly weathered, low plateaus that have been inhabitable for as long as any area in the United States (MDC 1998). In presettlement times Indians roamed the Elk River basin, but never established permanent residence (USDA-SCS 1989). Land cover for the presettlement Elk River basin in Missouri was estimated to be 60 % forest (USDA-SCS 1992) and about 5% prairie (MDC 1998). The remaining area was probably a mixture of intermediate land cover types such as woodlands, glades, and savannas.

The first settlers in Newton County arrived from Arkansas around 1830. Newton County, as originally organized, was about 1,400 square miles in area. It was divided into the present day counties of Newton and McDonald in 1849 (USDA-SCS 1989).

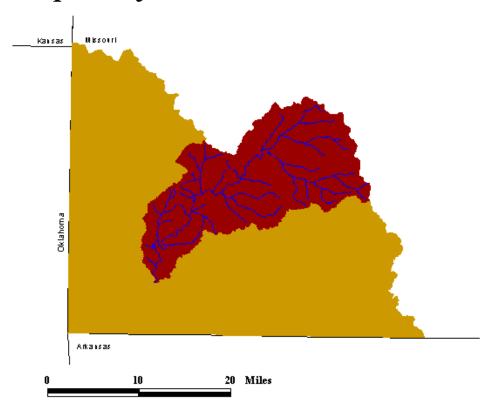
Beginning around 1830 the fertile creek bottoms were cultivated and used to raise crops of wheat, corn, oats, rye, tobacco, and buckwheat. In the early 1900s a fruit growing and truck farming industry developed that replaced grain and livestock farming. A series of droughts in the 1930s ended the fruit and truck farming industry in the area (USDA-SCS 1989). The first dairies were established in the 1870s and are still scattered throughout the area. Raising of beef cattle has long been a stable agricultural enterprise in the area. The poultry industry has developed rapidly since the early 1980s to become a multimillion dollar part of the area's economy. The most frequently cultivated row crops are wheat and soybeans (USDA-SCS 1989). In 1980, only 23% of Newton County was forested.

Mining for lead, zinc, and tripoli became a major industry in the area from 1880 to World War 1 (USDA-SCS 1989). Most of the mining appears to have been concentrated in the northern part of the basin. Mining for tripoli, zinc, and lead were more common historically. Present day mining seems to be primarily limestone products and sand/gravel operations.

The establishment of Camp Crowder military base south of Neosho from 1941 through 1946 and the settling of people exposed to the area while based there caused a steady population increase. This trend continued as people returned to the area upon retirement (USDA-SCS 1989). From 1970-1980 the population of the area increased by about 19%, with Neosho being the fastest growing town in the Missouri portion of the basin (MDNR 1985).

Land use patterns have changed over time in the watershed. Presettlement estimates indicate that 5% or less of the basin was prairie (Schroeder 1982). Information on land use from 1964-1965 indicates that 5% to 10% of the watershed was in cultivation with similar amounts in pasture (MCWC 1974). Land use estimates from 1985 through 1995 indicate that 35% of the watershed was in row crops or pasture, and the remaining 65% was forested (MDNR 1985 and MDNR 1996). George Parsons (MDNR, pers. comm.) indicated that, based on personal observation, considerably more land had been cleared for pasture production and grazing. He estimated the balance between pasture/grazing and forest land uses in 1998 was approaching a 50:50 ratio. The trend over the past 35 years has been conversion of forest to

Figure 10. Indian Creek EQIP priority area.



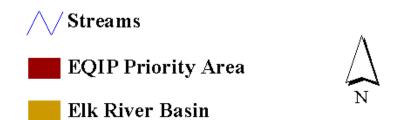
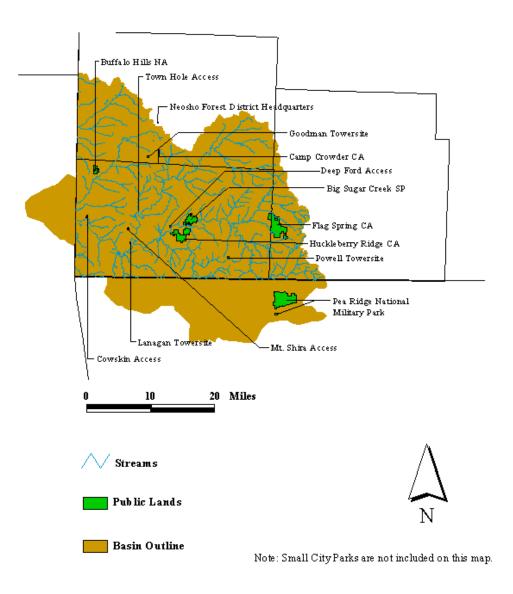


Figure 11. Public lands in the Elk River basin.



pasture in the Elk River basin. The current (1998) land cover found in the Missouri portion of the Elk River basin is depicted in Figure 9. Three communities in the basin participate in the National Flood Insurance Program (NFIP); Noel, Seneca, and Southwest City. Four communities are located in flood prone areas but are not enrolled in the NFIP; Anderson, Lanagan, Pineville, and Stella (MDNR 1986).

There are three PL 566 projects in the Elk River Basin: Lost Creek, Indian Creek, and Hickory Creek (MDNR 1986). A section 319 project, administered by the Southwest Missouri Resource Conservation and Development Agency, is planned for the Elk River basin. The focus of this project will be the association between water quality and the expanding poultry industry.

Indian Creek is an Environmental Quality Incentives Program (EQIP) priority area (Figure 10; MDC 1998). The EQIP program involves working with landowners to reduce erosion and animal waste pollution in streams. In the Indian Creek priority area practices are primarily focused on animal waste management. Some of the practices that have been installed in the Indian Creek EQIP area are riparian corridor fencing to exclude livestock from waterways and rotational grazing and/or alternative watering systems to improve vegetative filtering and reduce sediment in runoff reaching streams. Some of the benefits realized by landowners from these programs are streambank stabilization, reduced erosion, improved utilization of pasture, and improved livestock production. Wendal Rogers of the NRCS reported that 4,200 feet of riparian corridor along Indian Creek had been fenced to exclude cattle. He anticipates another 6,000 feet of riparian corridor fencing will be installed along Bullskin Creek in the Indian Creek watershed by 2001. Another landowner has enrolled 11 acres in the Conservation Reserve Program and plans to exclude cattle along this riparian area by installing 2,500 feet of fencing. From July 1998 through June 1999, 15 EQIP contracts were drawn-up involving 1,350 acres and a total financial commitment of \$178,622.00. These contracts involved projects dealing with composting facilities, nutrient management plans, planned grazing systems, stack houses, waste utilization practices, and upland wildlife management.

Public Areas

There are a variety of public areas in the Elk River basin ranging from limited access natural areas to river accesses to actively managed conservation areas. The majority of public land areas are owned and/or managed by MDC. Other state and federal agencies with public lands in the basin are the National Park Service (NPS) and MDNR. Several municipalities in the basin manage park areas that provide access to basin streams. Other facilities commonly available at these areas include ball fields, picnic areas, and playgrounds. Table 1 lists the public areas and activities available on them. Figure 11 shows the location of these lands within the Missouri portion of the basin.

Corps of Engineers 404 Jurisdiction

Most instream and some stream-side projects require 404 permits. Applications for permits should be directed to the appropriate U.S. Army Corps of Engineers office. The Elk River basin in Missouri and Arkansas is under the jurisdiction of the Little Rock District, U. S. Army Corps of Engineers (USACOE). In Oklahoma permits are available from the Tulsa District, USACOE.

Tulsa District USACOE P.O. Box 61 Tulsa OK 74121-0061 (918)669-7366 or (918)669-7368

Table 1. Elk River basin public areas.

Area Name	Acres	County	Activities	Management ¹
Buffalo Hills NA	486	McDonald	Hunting, Hiking, Camping, Bird watching, Nature study, Trapping	MDC
Big Sugar Creek SP	2,048	McDonald	Currently not open. Permitted activities not known.	MDNR
Cowskin Access	41	McDonald	Hunting, Fishing, Hiking, Bird watching, Nature study (0.1 miles Elk River frontage)	MDC
Deep Ford Access	42	McDonald	Hunting, Fishing, Hiking, Bird watching, Nature study (0.25 miles Big Sugar Creek frontage)	MDC
Flag Spring CA	3,955	Barry/ McDonald	Hunting, Hiking, Camping, Bird watching, Nature study, Target shooting	MDC
Fort Crowder CA	2,363	Newton	Hunting, Hiking, Camping, Bird watching, Nature study, Archery, Bicycling, Horseback riding	MDC
Goodman Towersite	40	Newton	Hunting, Hiking, Bird watching, Nature study	MDC
Huckleberry Ridge CA	2,106	McDonald	Hunting, Hiking, Camping, Bird watching, Nature study	MDC
Lanagan Towersite	57	McDonald	Hunting, Hiking, Bird watching, Nature study	MDC
Mt. Shira Access	26	McDonald	Fishing, Camping (0.25 miles Elk River frontage)	MDC
Powell Towersite	80	McDonald	Hunting, Hiking, Bird watching, Nature study	MDC
Town Hole Access	2	McDonald	Fishing (Indian Creek frontage)	MDC
Pea Ridge National Military Park	4,300	McDonald	Hiking, Equestrian Trail, Automobile tour	NPS

Lanagan City Park	10	McDonald	Swimming, Fishing, Canoeing, Picnicking, Outdoor recreation (Indian Creek frontage)	Leased by City of Lanagan
Noel City Park	less than 5	McDonald	Swimming, Canoeing, Fishing, Picnicking (Butler Creek frontage)	City of Noel
Sulphur Springs City Park	17	McDonald	Fishing, Camping, Outdoor recreation (Butler Creek frontage)	City of Sulphur Springs
Blankenship Park	16	McDonald	Fishing, Outdoor recreation (Honey Creek frontage)	Southwest City
Memorial Park	50	Benton	Swimming, Outdoor sports recreation, Picnicking	City of Bentonville
Phillips Park	56	Benton	Outdoor sports recreation, Picnicking	City of Bentonville
Park Springs Park	18	Benton	Spring, nature trail, Picnicking	City of Bentonville
Neighborhood Parks (3)	varies	Benton	Outdoor recreational activities	City of Bentonville
Dave Peel Park	2	Benton	Playground, Picnicking	City of Bentonville

¹ Management responsibility - MDC = Missouri Department of Conservation, MDNR = Missouri Department of Natural Resources, NPS = National Park Service

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